

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor : Dollinger et al.
Assignee : Bayer CropScience AG
Serial No. : 10/591,674
Filed : February 19, 2005
For : **Novel herbicides based on substituted thien-3-yl-sulphonylamino(thio)carbonyl-triazolin(thi)ones and 4-HPPD-inhibitors**

DECLARATION

I, Dr. Erwin Hacker, state that I reside at Margarethenstraße 16, 65239 Hochheim, Germany, I am a citizen of Germany; that I am familiar with the subject matter and the prosecution of the instant application Serial No. 10/591,674 filed on February 19, 2005, entitled; Novel herbicides based on substituted thien-3-yl-sulphonylamino(thio)carbonyl-triazolin(thi)ones and 4-HPPD-inhibitors that I consider myself qualified by my education, knowledge and many years of experience in agricultural chemistry to make this Declaration; and that I have made the following observations:

1. The instantly claimed invention is directed to novel herbicidal combinations of compounds belonging to the class of substituted thien-3-yl-sulphonylamino(thio)carbonyl-triazolin(thi)ones and one or more HPPD-inhibitors. In my opinion, the invention is clearly distinguishable from the prior art.

2. The following tests have been carried out under my supervision and my control.

Seeds of *Alopercurus myosuroides* were grown under natural field conditions. Treatment with each of the compounds to be tested and/or a combination of these compounds was done at the 3 to 5 leaf stage with an amount of water to be equivalent to 100 to 400 l/ha.

14 days after application, efficacy of the single compounds and of the respective combinations was visually checked by detecting the development and damage of plant parts growing on top of the soil.

The collection of data is given in Table 1, below.

Table 1

| compound | application rate g ai/ha | <i>Alopercurus myosuroides</i> control in % | theoretical synergistic efficacy |
|-------------------|--------------------------------|--|--|
| I-2 | 5 | 55 | |
| B.3 | 25 | 25 | |
| I-2 + B.3 | 5 + 25 | 93 (↔ synergism) | 80 |
| sulcotrione | 25 | 15 | |
| I-2 + sulcotrione | 5 + 25 | 65 (↔ antagonism) | 70 |

In above given Table 1, 100% means all plants are dead, 0% means no visible control (growing identical to the growing of the untreated control).

Consequently, it is not obvious for the skilled person - either in view of D1 or in view of D1 combined with D2 - to combine thien-3-ylsulfonlamino(thio)carbonyl triazolinones of formula (I) + a compound belonging to a selected group of HPPD inhibitors in order to obtain an increased performance concerning weed control.

3. Table I shows that by applying the combination [I-2 + B.3] (i.e. a combination according to the invention) a synergistic efficacy is observed whereas by

applying a combination that may be obvious in accordance with D1 [I-2 + sulcotrione] the contrary, i.e. an antagonistic effect is observed!

4. Therefore, it is my opinion that the instant invention is clearly different from and is not obviated by the information disclosed in D1 (US 2005/0003963) and/or D2 (US 2003/0078167).

5. I conclude that the superior weed control by the combination of a thien-3-ylsulfonylamino(thio)carbonyltriazolinone of formula (I) + a compound belonging to a selected group of HPPD inhibitors according to the instant invention is significant and unexpected in view of D1 (US 2005/0003963) and/or D2 (US 2003/0078167).

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Dated this 24, day of April, 2009

Signed:

